FYP Ideas - Fall 2023

1. FYP Title

FYP Description

2. Healthcare Record System

Blockchain technology is being used to securely store health records and ensure accuracy. Various organizations, including doctors, hospitals, laboratories, pharmacists, and health insurers, can seek permission to access a patient's record and update transactions on the distributed ledger.

3. Qwizard - An Automatic English Comprehension Quiz generator

Our tool can generate multiple-choice and open-ended questions from English narrative or informative passages. These questions can be compiled into quizzes to test comprehension and memory. Additionally, our app can automatically evaluate quiz scores.

4. Brain Tumor Segmentation for 3D Tumor Visualisation

The aim is to segment medical scans and predict outcomes. Additionally, a module visualizes entities such as tumors and subtypes obtained from the deep learning pipeline for medical image segmentation.

5. An app for Medical Diagnosis

An app is designed to diagnose medical conditions, including breast cancer, by analyzing various factors.

6. Deep Portrait Drawing

Creating realistic human images has various benefits for fashion design, movie special effects, and educational training. DeepPortraitDrawing is a new approach that generates realistic human images from rough freehand sketches. Instead of focusing on generalization, the method projects test sketches to part-level shape spaces based on image training data. This helps bridge the gap between training and test data, as well as between sketches and realistic images. By combining part-level information from different training images, a wide range of human images can be covered.

7. Automatic foley sound effect generation for video clips

The FYP enhances certain events in movies, recorded sound is sometimes replaced with manually recreated soun effects. Foley artists are hired by movie companies for this purpose. Our software, "Auto-Foley," examines movie scenes and automatically adds the necessary sound effects to those specific scenes.

8. A Multimodal Approach for Tumor Detection using Deep Learning

A software converts 2D X-rays to 3D images, detecting and highlighting damaged areas or tumors. It can segment the desired organ at the damaged location, aiding specialists in decision-making. The software improves diagnosis accuracy and provides information on tumor size and density.

9. Simulator for Command & Control (C2) System of a Ground Based Air Defense (GBAD) System

The project aims to simulate a typical GBAD system, incorporating various operations such as Threat Evaluation & Weapons Assignment (TEWA). It will include a GIS-based 2D visualization application to show SAM disposition and threats, as well as a 3D visualization of missile flight. Additionally, an augmented reality (AR) visualization of the theater of operation for top commanders is considered a desirable feature.

10. JARVIS

The project aims to use patient data to create a knowledge graph and train a model to predict treatment success. It will provide decision support to doctors based on real-world evidence, helping them choose appropriate treatment plans. The project is a collaboration with CureMD, who will provide the data. The key elements include extracting information from unstructured data, representing it as knowledge graphs, training a predictive model, and explaining the outcomes. Initially focused on breast cancer, the goal is to eventually expand to all cancer types.

11. Maritime AI

Maritime AI aims to enhance situational awareness and monitor the integrity of maritime navigation traffic. By fusing various sensor signals, such as vision, sound, radar, lidar, GNSS/IMU, and AIS, the project utilizes machine learning algorithms to identify anomalous traffic patterns, kinematics deviations, and anomalous movement of materials from vessels. This is achieved by analyzing AIS data, which includes vessels' static and dynamic information obtained from the automatic identification system.

12. CureAssure - A Decision Support System to assist chemotherapy practitioners in following th treatment practices

A Decision Support System uses NLP to extract treatment information from NCCN guidelines. The data is encoded using decision trees or other ML techniques. The system validates the treatment decision and compares it to the clinician's decision, aiming to recommend and make accurate decisions for the patient.

13. Docigize: Automatic digitization of Handwritten Bilingual Documents

Preserving medical records is crucial for the healthcare sector's development. It aids in informed decision-making, patient advice, and policy-making. In Pakistan, medical information is mostly handwritten on paper, making it expensive and difficult to access. To address this, we aim to develop a system that can extract relevant information from prescriptions, despite the multilingual and cursive nature of the text.

14. Polyglot Interpreter : Multilingual Extractor for Handwritten Hotel Forms

Hand filled forms with various types of option boxes and text boxes are still widely used worldwide, despite the progress of IoT. Examples include medical prescriptions, appointment and registration forms, hotel feedback forms, restaurant reservations, and transport bookings. Detecting these different types of boxes and handwritten text is still being researched. Our goal is to develop effective methods to address these challenges.

15. Enabling Drift in CACHEJOIN

The handling of real-time stream data in Data Warehousing is a challenge for companies. The Cache Join algorithm aims to speed up this process by optimizing join operations through a cache. However, preparing and emptying the cache is time-consuming. To solve this, we propose using statistical and deep learning models to predict upcoming data and fill the cache in advance.

16. Lip Read

A model is developed that can predict speech in videos without audio. The video will be processed using image processing techniques to enhance its quality. The model will detect the words spoken, and NLP concepts will be used to fill in any missing information. The dataset will be generated using YouTube videos and autogenerated English subtitles. The main objective is to achieve high accuracy.

17. Automated Report generation using voice-to-text models

An automated report generation software has been developed to generate reports in Urdu, English, and Roman Urdu for any specific encounter or accident. The software processes conversations and requires field-specific terms and jargon to accurately generate the reports.

18. TestDrive

The idea aims to replace traditional driving tests by eliminating the need for an examiner. Instead, cameras and computer vision with artificial intelligence will monitor the driver and provide an evaluation of their skills.

19. Automated Inspection Technique for Surgical Instruments

Our FYP aims to develop an automated inspection technique for surgical instruments using machine learning and image processing. Dr. Frigz International, a surgical instruments manufacturer, will collaborate with us. Pakistan is a major exporter of surgical equipment, but quality issues and competition are affecting exports. Manual inspection tasks in Pakistan are prone to errors and less efficient. We need a technological solution to ensure quality and adherence to standards. We will use image acquisition techniques to gather a labeled dataset of visual defects in surgical instruments and build

20. A tool for empathetic training of teachers based on Facial expressions and Spoken Language

The FYP enhances physician empathy by evaluating their interactions with patients. It involves analyzing speech and facial expressions to assess their behavior. Feedback is provided to physicians to help them improve their empathetic approach towards patients.

21. Light weight UNET based architecture for segmentation of chronic kidney disease

Researchers are utilizing AI to identify crucial features in chronic kidney disease through MRI and CT-scans. This approach aims to select the minimum yet most influential features and accurately segmentize the damaged region in the medical images.

22. Decision Support System (DSS) for Google Play Console

It is a Decision Support System for android developers, which analyzes an app's statistics and assists in making decisions related to monetization and audience growth.

23. Phonatics

The FYP idea is to create a web app using NLP and machine learning. It will analyze sentiment in Smart Phone reviews by downloading YouTube videos, converting them to audio, transcribing to text, and performing text classification and NLP. Users can compare smartphones based on features and reviewer sentiments.

24. What's New (Trend Article Generator)

The project aims to automate article writing by developing a product that gathers data on recent trends from the internet. Using NLP and AI classification, it builds a timeline and generates meaningful news articles with high success rates.

25. Fashion Recommendation System

A Machine Learning model analyzes user's fashion sense by inputting pictures of their current clothes. It then suggests clothing items to buy, providing a list of recommendations and links to the respective stores.

26. Accurate market analysis for commercial purposes

This project aims to assist businesses in determining the most profitable products to introduce, aiding in their decision-making process.

27. Smart Vision

A new AI camera system will be developed to address unfair exams. It tracks attendance, detect cheating, and measure student engagement. Integrated with classroom or exam hall cameras, it saves time on attendance marking and discourage cheating.

28. RecogLip: Sentence Level Lip Reading Headgear

Our project aims to develop an app that can identify text solely by analyzing lip movements. This is achieved by utilizing the webcam on smartphones or laptops, as well as camera modules connected to development kits like Raspberry Pi, Jetson Nano, or Google Coral.

29. Auto Surveillance for Security

This text describes a computer vision surveillance application designed for businesses and institutes. It aims to analyze and protect their staff and premises. The application is modular in nature, making it adaptable and customizable to specific needs.

30. Speech to Smart Contract

This project is a web application that allows users to upload various types of content. The application uses a novel structure for event-centric knowledge graphs to determine the context of the input. It features large-scale similarity search, embedding creation for different types of content, machine-learning pipelines for various tasks, workflows for aggregating business logic, and a user-friendly web interface. The project faces challenges such as data requirements for model training, integration of models into the web application, handling diverse data sources, cross-platform compatibility,

31. 3D Visualizer: 3D visualization of a place

This project allows users to create 3D visualizations of objects they want to place in a specific location. Whether it's a sofa or curtains for a room, users can preview the look and feel of these items before making a purchase or bringing them home, using virtual reality technology.

32. Treffen

The increasing use of online meeting apps has highlighted the lack of support for deaf and mute individuals. Hiring sign language interpreters can be costly and time-consuming. To address this, we have developed a solution that allows deaf/mute individuals to communicate in American Sign Language (ASL) through their device's webcam. Our application recognizes and translates the signs into speech, enabling seamless communication for everyone.

33. Automated Exploratory Testing

It is an automated tool designed for exploratory testing, which aims to automate the testing process.

34. Web SPL Auto-Testing

A mechanism for Automated Functional Testing of Web-Based Software product line (SPL) will be introduced. Test cases will be developed for the base variant and reused for the entire Web-Based SPL using the principle "Write Once, Run Anywhere". The feature-oriented approach will be applied, mapping SPL features with corresponding test cases based on commonalities and variabilities.

35. Security Breach in Ardu Pilot Simulator

The Micro Air Vehicle Link Communication Protocol enables wireless communication between entities. In drones, it facilitates bidirectional communication between the drone and the GCS. The GCS sends commands and controls, while the drone sends telemetry and status information. This encrypted communication ensures safety and privacy. Our role is to decrypt and send encrypted messages to the vehicle, allowing us to manipulate its route or jam it, gaining control. The project aims to enhance the security of drone simulation using software like Mission Planner, APM, Wi

36. Talabgaar

This mobile app offers on-demand services of plumbers, electricians, mechanics, and carpenters. Users can request services anytime, anywhere with a touch of a button. Nearby service providers are readily available. Users can also register as workers to earn money. The app allows access to existing services and suggests new ones. It is a safe, secure, and easy solution to your problems.

37. Portal for MSRC

The MSRC is fully automated through a dedicated portal and environment, catering to every individual involved in its operations.

38. Hire IT

We are developing a website/web-plugin in collaboration with Dice Analytics to automate the hiring process. The project consists of three parts: CV parsing, language fluency testing, and gesture recognition to assess candidates' competency and credibility.

39. CodeStory VR

CodeStory VR is an interactive 3D environment that helps novice programmers learn programming concepts, logic building, and problem-solving through gamification. It aims to address the lack of hands-on learning and quality personal learning systems in the IT industry.

40. Even

Even is an e-commerce site that provides businesses and consumers with a hassle-free and secure platform to access raw materials and consumer goods. Buyers receive verified and sealed orders delivered to their doorstep, with 24 hours to inspect and report any fraud. Sellers can manage their products through a dashboard and communicate with buyers via a chatbot. Payments are held for 2 days to prevent fraud, and sellers are ranked based on reviews and sales. The target market is businesses struggling to acquire affordable raw materials, particularly new

41. Item Response Theory Based Personalized evaluation and assessment system for students of schools

It is an Industrial project involving an LMS. Our focus will be on implementing a "Chatbot" and "personalized Evaluation and assessment" for various use cases.

42. Real Time Health Monitoring of Remote Patients

Real-time health monitoring of remote patients is achieved through the utilization of IoT. This approach employs non-invasive methods such as wearables and smartphones.

43. E-Interview

An electronic Interview platform will be developed, replacing human interviewers with a bot. Further details can be found in the attached file.

44. Real time Monitoring System for Honeey Bee

It is a real-time analytics system that monitors honey bee colonies. It predicts swarming, analyzes temperature and sound. The system involves sensors, processing on Raspberry Pi, and building a Data Pipeline web and mobile dashboard for real-time analytics and prediction.

45. Brain Tumor Detection using Deep learning and Image Processing

This R&D project utilizes various deep learning algorithms and image processing techniques to detect brain tumors.

46. Pulmonary Fibrosis Progression or Cervical Spine Fracture Detection

Pulmonary fibrosis, a terminal lung condition with thickening and scarring of lung tissue, is challenging for clinical trials and patients. A study proposes using CT scans and deep learning to predict disease progression, FVC decline, and its impact on life expectancy.

47. Automated Interview Trainer

The FYP aims to create an Interactive app for interview training. The app simulates real-time interviews, with the interviewer asking questions through voice. The interviewee responds, and a detailed report is generated highlighting areas for improvement. An Overall rating is provided at the end.

48. Drowsiness Detection System

Our project aims to detect drowsiness, fatigue, and unconsciousness in vehicle operators, particularly truck, bus, and train drivers. Using computer vision and AI, the system sounds an alarm through a connected app if the individual is asleep or unconscious. It also notifies emergency channels and authorities to prevent accidents like the recent bus accident, where 23 people died due to the bus driver falling asleep and colliding with an oil tanker.

49. eBazaar

An online marketplace that utilizes a deep learning AI model to provide recommendations. The marketplace allows multiple vendors to sell their products and services.

50. HereIAM

HereIAM is a mobile app that allows users to retrieve their personal data, locate their lost or stolen phone, and control its functions. It will be developed as a web-server and Android app, enabling users to access their phone's features through a website or SMS commands. Users can track, ring, lock, unlock, and retrieve data from their device.

51. Apache Storm Resource Scheduler

This project aims to research and develop a solution for optimal resource allocation in streaming data on clouds using Apache Storm. The focus is on identifying research gaps in existing schedulers and proposing a solution to improve performance by efficiently mapping data on available resources.

52. FastPanda

FastPanda is introducing an online food ordering system for students and faculty. It provides estimated completion times based on factors like order queue and cafe task scheduling.

53. News Analytics as a Service

The project "News Analytics as a Service" aims to develop a web application that scraps news and conducts big data analytics using Apache Kafka, Apache Spark, and Hadoop. The application filters out news unrelated to specific locations or future events. News are displayed on a map of Pakistan, with markers indicating the location and color-coded to represent positive or negative sentiment. Users can filter news by keywords and time frame.

54. BROWSER SAFETY EXTENSION

A browser extension offers users security and protection from various internet threats, including malicious URLs, downloadable links, tracking, typo squatting, and safeguarding sensitive data on different websites.

55. DinoSOAR

A security instant response platform is being expanded to assist security practitioners. The tool enhances collaboration, provide detailed information, and analyze alerts and observables, aiming to simplify the work of security professionals.

56. SIEMless Security

A single solution should be implemented to detect, investigate, and resolve security incidents and threats. This solution will offer actionable insights and analytics-driven intelligence for real-time security monitoring.

57. Threat Intelligence Platform

A flexible threat intelligence platform (TIP) that collects and organizes data from various sources. Our TIP will offer a wide range of tools and customizable playbooks to automate the investigation process. We aim to create a modern and user-friendly interface, as data visualization is crucial. This project is relevant due to the rising number of security threats and will allow us to explore different computing domains and cutting-edge technologies.

58. Automated WebApp Dynamic OWASP Security Tester

A solution that can scan websites for OWASP top 10 and common vulnerabilities. Additionally, the solution includes an exploitation feature and generate a report on vulnerabilities, along with defensive measures to prevent future exploitation.

59. Digital and smart learning system

We aim to revolutionize education with a stable and efficient learning system using AI and machine learning. Our system includes current study facilities and additional features to simplify tasks for students and teachers. It consists of a tablet and AI-based software for learning management.

60. Curricular - Online Course Aggregator

This project aims to develop a user-friendly web platform for effortless course searching. The platform ranks and sorts results based on user-selected parameters, providing a seamless learning experience. Users can search for courses and apply filters such as duration, pricing, and providers. This allows for convenient and informed decision-making, as users can easily compare available educational courses.

61. 3D Map Generation For Houses

Generative AI employed to create 3D maps for residential properties.

62. Soft skills training using AI

Sentiment analysis is performed using Natural Language Processing (NLP) and Computer Vision techniques. This involves analyzing emotions and opinions expressed in text and images.

63. Interactive Scene Generation

Our FYP is a desktop application that enables users to create 3D environments using natural language text and speech to understand and display spatial relationships between objects. It aims to assist artists, interior designers, video game developers, and architects in creating 3D virtual worlds by suggesting ideas for various 3D assets, thereby aiding in solving creative problems.

64. Algebraic Methods in Graph Neural Network Design

This project aims to explore the use of algebraic methods in graph neural network design. It also seeks to incorporate advanced mathematics in network construction to avoid common design pitfalls.

65. MarkAid (An auto grading tool)

The company plans to develop a product that can check and grade essay answers based on custom policies set b instructors. They will use advanced AI models to assess the relevance of answers to the marking scheme. Additionally, they will create a platform for teachers to easily conduct tests without the need for bulk uploading or formatting answer documents.

66. ANewGame – Game generation based on AI-generated storyline

The project aims to create a game in Unreal Engine, featuring an AI-generated storyline and an interactive world that corresponds to the narrative.

67. TRADINI: Automated Stock Trading Bot using Real-Time Market Prediction and Sentiment Ana

An automated trading bot is designed to make stock predictions in real-time. Users can access stock information, news, predictions, and historical data. The bot can be customized for long-term (1Y, 5Y, 10Y) or short-term (1D, 2D, 5D, etc.) trades, with a specified percentage of the portfolio to invest. The bot's trained model will predict the top 3 investments, including their predicted prices at a specific time. The

68. KisaanDost

Dost is a general-purpose chatbot designed to chat in Urdu about various topics. It provides factual information by retrieving relevant content. The chatbot's main focus is in the domain of agriculture.

69. C-BAS

Breach and attack simulations are advanced computer security tests that mimic likely attack paths and techniques used by malicious actors. They identify vulnerabilities in security environments, specifically targeting cloud infrastructures.

70. Intel-Pixel

This project aims to create an AI Model that can generate images based on text descriptions. The model can generate images even from vague descriptions, but being specific leads to more accurate results. It has applications in game development, comic generation, and more.

71. ImbruteASM

Endpoint Detection and Response (EDR) Systems are designed for threat analysts and security officers to track and eliminate threats to their endpoints. These platforms help monitor, analyze, quarantine, and remove threats, including potential and Advanced Persistent threats. EDR features include real-time data protection, threat monitoring, investigation, stored threat database, intelligence, behavioral analysis, instant identification and response, and cloud-based detection for effective identification with minimal impact on endpoints.

72. Kiraya

Kiraya is a rental marketplace called Utilize to Monetize. It enables users to rent out their products and services, aiming to create a secure and well-maintained platform for leasing.

73. Ecommerce Analyzer (Analytica)

This tool analyzes ecommerce market trends, predicts future trends, and optimizes capital utilization. It identifies product shortcomings and positive features. It enables bulk purchasing and helps users find the best value deals.

74. ePloy

ePloy is an e-recruitment platform that allows job seekers to upload their CVs and employers to post job vacancies. The system analyzes each applicant's CV and assigns a score based on the employer's requirements. Employers receive a ranked list of applicants and can use the built-in interview scheduling system to streamline the process.

75. SmartVision

There are currently limited glasses for the blind, but they are expensive. To make them more accessible, we aim to develop affordable glasses with desired features. These AI-powered smart glasses use artificial intelligence to identify and describe images and text to the user.

76. Automated Football Highlights Generation

Our project aims to develop software that automatically generates football highlights. This is necessary as highlights are typically uploaded days after the match. We utilize Computer Vision and Natural Language Processing to extract significant events.

77. PALANTIR

Palantir is a system that uses visual data to create indoor maps. Users take pictures to collect the data, which is then used to navigate to specific locations on the virtual map.

78. inThreat Raider

A Cyber Threat Intelligence Platform called "inThreat Raider" to help organizations with security planning. It collects and monitors incoming and outgoing data, analyzing it for potential threats. The platform generates user-friendly analytics and automatically block and alert about any identified threats.

79. BSafe - Cyber Security Awareness Platform

In many schools in Pakistan, cybersecurity awareness is often ignored, leaving students vulnerable to online risks. Our application aims to teach students safe internet practices and how to defend against common attacks like phishing and ransomware. By experiencing these attacks in a safe environment, students will learn how to protect themselves online.

80. Smart Waste Optimized Collection

Due to urbanization and overpopulation, solid waste collection is a major challenge. The current system is inefficient and costly. We plan to develop an AI-driven waste management system using smart bins to track fill levels and optimize collection routes. This will reduce costs and involve private contractors. The aim is to create an efficient algorithm and forecast bin levels for further optimization.

81. CyberCamp

This platform offers comprehensive Cyber Security education and serves as a vast testing platform.

82. Cyber harassment reporting Portal

A portal is created for cyber-harassment victims to file complaints with the investigation department. Additionally, a consultation service is offered to support the victims.

83. Securewatch

A team is developing an application to raise cyber awareness and provide hands-on practice for vulnerable age groups (below 18 and above 60). The app is available on the play store and uses animations to demonstrate various types of attacks and security procedures. It includes challenges and activities for training and testing purposes.

84. Unmask

A user-friendly platform has been developed to identify deep fake videos. It enables users to easily detect and distinguish manipulated videos from authentic ones. This technology aims to combat the spread of misinformation and protect individuals from falling victim to deceptive content.

85. Eat Fit

A mobile app simplifies meal planning and exercise based on dietary restrictions and fitness goals. It recommends personalized meal and exercise plans, allows users to save recipes and create grocery lists. Users can also scan and store hard copies of recipes. The app offers intermittent fasting plans, connects users with similar tastes, and provides progress charts for motivation and tracking progress.

86. E-Skool

This app is designed for kids aged 3 to 6. It offers a combination of play, fun videos, and learning activities. Parents can track their child's progress through assessments and games. The app uses a category-based learning approach and categorizes students using KNN.

87. Real Soccorlytic

In today's world, computing real-time broadcast stats for football clubs and betting companies is a challenge. Analysis is done to optimize performance, support coaching, improve player performance, and provide tactical insights. Unlike cricket, there is no facility to analyze football player performance. Our web app helps coaches analyze player performance to compete at the national level. We broadcast real-time analytics of live soccer matches, identifying team and ball movement using computer vision. We calculate important findings such as completed passes and team possession.

88. Lodgers

Lodgers is a web-based application and android app that helps students, job holders, and travelers find accommodations online in a selected location. It recommends accommodations based on user preferences and allows property owners to upload and manage their listings. Lodgers also rates hostels using sentiment analysis. Technologies used include React-Native, Mern stack, React Js, Node Js, express, and mongo Db.

89. Ace Surveillance

The smart surveillance system is an AI computer vision platform that assists shops and malls in monitoring common areas efficiently. It can be integrated with existing camera infrastructure or surveillance videos. The system incorporates five key features: Crowd Analytics, Anomaly Detection, Heat Mapping, Checkpoints Alert, and Parking Alert.

90. Digital Examination Hall

The aim is to develop a digital exam room that can identify and prevent any malicious behavior from students.

91. NasCon Management App

We are developing a web and mobile app for managing the Nascon event. The app will have two views: one for admins and one for applicants. Admins will have role-based access, while participants can register and view event information. Additionally, participants can use the app to send messages to the management for any issues or complaints.

92. ANIGEN Automated Urdu Spokesperson

This text describes a system that can create a personalized 3D avatar of a person. The avatar can speak a script written by the person using their own voice or a random voice. The avatar's movements and expressions will match the voice. Various templates and video backgrounds can be used, and the final video can be downloaded, uploaded, or shared on YouTube or social media.

93. Idraak

The Urdu Sign language to Urdu Text Translator project aims to capture signs in Urdu through a camera and translate them into corresponding Urdu text. It involves collecting and improving datasets and training a model for accurate translation. The project may shift to a research domain depending on the perspective change.

94. Qissa Suna

Qissa Suna is an application that converts Urdu children story books to speech. It uses Machine Learning and Data Processing to convert text to speech, allowing users to input their own story book texts. Users can assign voices to narrate the story, save progress, convert Urdu stories to English, adjust reading speed, and export/download audio books.

95. Fake Speech Detection

The text describes a mobile app that uses AI to detect fake speech.

96. RideEZ

The project aims to improve existing car booking apps, such as Uber, by incorporating distinctive features for enhanced functionality.

97. V leaRn

The project aims to utilize VR technology in developing a virtual classroom, providing students with an interactive learning environment to enhance active engagement. Users will have animated avatars and an interactive setting, enabling a more immersive and hands-on experience.

98. Auction/Marketplace Blockchain

Online auctions are a platform for buying and selling goods through bidding. Bids cannot be lower than the starting price. The use of blockchain technology ensures transparent tracking of all bids made.

99. EmberSpace

This summary is about a 3D multiplayer FPS game that reflects the Metaverse. It offers a gratifying user experience through AI enemies, player interactions, and the opportunity to earn money by linking a cryptocurrency account.

100. HostelArc

This system is designed to help hostel management save records of students' rooms and other information. It eliminates manual work and makes it easier to find student records, mess bills, and information about past hostel residents. Students can search for hostels based on their preferences and there is a chat room for discussing problems. The system also provides details on student fees, room allocation, and mess expenses. It includes features such as room occupancy, student IDs, and availability of free rooms.

101. SmartRoad

This project has three functionalities related to traffic road sign boards. The system detects if a traffic sign board is present and checks if it is correct for the location, notifying the user. If the sign is not appropriate, the system predicts the best suitable sign. It also detects if a sign is needed and marks predicted signs on Google Map. This system makes placing signs easier for authorities, reducing accidents due to missing or incorrect signs.

102. Voice Assistant for Google Apps

A new extension will be developed to enable disabled individuals and beginners to utilize Google Apps using voice commands. This extension will accept voice commands as input and execute the desired task on the designated Google App.

103. Deep Learning Based Automated Cardiac Diagnostic System

This project focuses on using computer vision and healthcare to diagnose cardiac issues using cardiac MRI. It aims to automate the diagnosis by detecting end systolic, end diastolic volume, and ejection fraction. The proposed method utilizes publicly available cardiac MRI datasets and employs UNet for segmentation and a neural network for classification. The goal is to reduce the time taken by cardiologists for measurement and improve the prediction of heart failure. The final product will be deployed as a web/mobile based UI after extensive testing.

104. Automatic House Design from Linguistic Descriptions

Home designing is typically done by professionals with architectural skills and tools. However, a project called HGPM aims to create house designs using a generative and adversarial neural network. This allows a worker without prior knowledge to generate a whole house design based on a description of their desired outcome.

105. DeTox (Detect Toxic Speech)

The goal is to identify hate/toxic speech in videos using various methods like audio and text analysis. First, a dataset will be created and labeled for training. Then, a multi-modal deep learning approach will be used for detecting toxic speech. Finally, a frontend will be developed to upload videos and identify toxic segments.

106. DigiSync

The project aims to automate the entire process of digital marketing by integrating various platforms and applications. It generates content using AI for different events and suggest suitable content for different platforms. It also creates webinar links and handle email and SMS automation. Additionally, it provides a single chat option for multiple social media handles, eliminating the need to switch between different messaging apps.

107. InspectX

This Mobile App platform offers a sought-after service for inspecting the quality and condition of desired items. It connects inexperienced buyers with experts, allowing customers to obtain unbiased and detailed reports before purchasing products like cars, homes, and electronic appliances.

108. TinyToes

To assist new mothers with their concerns about their babies, we are creating a chatbot. This chatbot will provide solutions to everyday issues, recommend nearby medical facilities and stores, and arrange live sessions with doctors. Additionally, it can help schedule appointments and provide regular updates on the baby's activities.

109. Image Based Search with Recommendation system in a market place

It is an escrow-based website to combat increasing fraud in the digital business world. This secure system allows users to send and receive products without worry. It also enables users to verify if the product matches the description and return it without losing funds. The website will utilize web development, Solidity for contract development, and AI for chatbot and sentimental analysis.

110. SUMMSLIDES

Our project aims to convert any document's pdf into slides with important notes. Users can select specific pages to make notes. The project primarily focuses on pdf files and theory-related books, specifically in the English language.

111. CementO

This project aims to create a web application for purchasing construction materials online. Users can easily buy products from various brands without leaving their homes. The platform will allow vendors from across the country to sell their products, providing users with a one-stop shop experience. The site will be built using ReactJs and will include features such as a comprehensive database, product search using machine learning, and advanced e-commerce functionalities like ratings, distance, vendor details, and delivery options.

112. Forex Trading Bot Assistant

A computer bot is designed to automate trading by predicting market trends using artificial intelligence. Traders can use it to increase their chances of profit by automating trades based on predefined conditions. The bot evaluates currency pairs and only executes transactions when the conditions are met, aiming to maximize profit and provide data insights.

113. Cryptographically secured federated learning for healthcare consortia

A practical blockchain scheme is proposed for hospitals to engage in federated learning. The approach utilizes cryptograms to ensure privacy and anonymity, departing from previous methods such as Secure Multiparty Computation, Differential Privacy, and homomorphic encryption. The system is developed using a MNIST healthcare dataset for a real-world scenario.

114. Webapp for trash detection using blockchain and Image processing

The project aims to address the issue of trash on Pakistani roads by using dash cams in government vehicles to collect real-time footage. This footage will be analyzed to identify trash, and the vehicle's location will be stored on a tamper-proof blockchain network. A webapp will be developed for the responsible authority to receive notifications and track neglected areas.

115. MedGnosis

A decentralized system has been developed to predict cardiovascular diseases using federated learning. This system ensures privacy preservation while allowing multiple institutions to collaborate and share data. By utilizing federated learning, the system enables accurate predictions without compromising the privacy of individual data.

116. Deep learning based Seizure prediction through heart rate variability

Heart rate variability (HRV) is a measure of autonomous nervous system disruption and is utilized in predicting seizures. This research and development project aims to identify the most effective combinations of HRV features to enhance seizure prediction.

117. Deep Farm

Deep Farm is an AI-based system that uses satellite images to estimate crop yield and provide crucial information to farmers, including crop types and water levels. By reducing resource usage, it aims to assist farmers in making informed decisions and optimizing their farming practices.

118. AI Career Counselor

Career counsellor systems provide online assistance in selecting the right career path by assessing relevant skills. With the growing number of career options, career counseling has become essential in today's world.

119. E Learning Platform for WEEPRO CODERS

A new platform is being developed to integrate Zoom, WhatsApp, and online coding practice, among other features. This platform aims to provide a comprehensive solution for various activities, allowing users to conveniently access and utilize these tools in one place.

120. BPMN and Business rule, Modeler

A new modeling tool is being created to assist business analysts in using bpmn notation to model processes. It will also help them model important business rules that will be applied to those processes.

121. Cold Chain Management Using Blockchain

The Cold Chain, crucial for public health, requires effective management. We propose a Blockchain-based system to improve shelf life, enhance transparency, track transactions, and increase supply chain efficiency. Machine Learning is incorporated to forecast future stock.

122. codeverb

This application converts general language text into executable programming code. It uses written passages or voice commands to generate relevant code. It leverages large language models trained on web archives and code bases from open-source platforms. It assists disabled individuals, non-programmers, and experienced programmers by intelligently recommending the next piece of code.

123. Quran: E-Teacher

Interactive web and mobile applications will be created to aid non-native speakers in learning Arabic and reciting the Holy Quran. Machine learning techniques will be utilized to enhance pronunciation and fluency, addressing the key challenge faced by learners.

124. Product Reviewing Eco-System

Out of Ten is a website that offers product reviews. Users select a product category, enter the product name, and reviews are displayed using data visualization. Reviews are generated from various sources, including YouTube videos, comments, websites, and Amazon reviews. The data is processed and analyzed using NLP and techniques to generate accurate reviews. The website focuses on electronics (mobiles & laptops) and cosmetics.

125. AR Royal Table Tennis

This text describes an AR 3D table tennis game that uses machine learning techniques to track the ball in real-time and allow for smooth interactions. The game requires an AI opponent to make it challenging, and the accuracy of the opponent's movements is achieved through machine learning.

126. Eagle Eye

The aim is to develop an explainable AI system that predicts new threat generation rules. It will analyze data from past attacks and generate rules using heuristics and changes observed in new attacks.

127. Real Estate Management System

Jahan Marketing, a Multan-based company, is having their Real Estate work automated through an industry-funded CRM System. This system aims to streamline their operations and improve efficiency in the Real Estate industry.

128. Arrange it

The project aims to solve a common problem in academic departments by creating an automated system for arranging students during exams. The goal is to save academic resources and assist the department in creating daily examination schedules efficiently.

129. A Pedagogy Tool for Data Science

The project aims to develop a platform for non-tech users to easily work with data science. It will automate the data science pipeline, including preprocessing, visualization, feature engineering, and modeling. The platform will provide recommendations for the next steps based on the user's data. It will have an interactive and user-friendly interface, serving as a learning tool.

130. 3C (3d characterizer)

The project aims to create a 3D model compatible with Unreal engine. Users can upload their image and a personalized 3D model will be generated, serving as a character in a game.

131. DERMAASSISTANT

DermAssistant is a smart app that detects skin diseases, provides descriptions, suggests remedies, and recommends nearby dermatologists specializing in treating those diseases.